

# Improving performance by improving the relationship with the companies in the supply chain

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**Abstract**—This paper will address issues related to strategy, quality and management of customers and suppliers, and its main objective is to demonstrate the benefits of cooperation between customers and suppliers in the supply chain. A case is presented about a Brazilian company with assets in several sectors of the economy that implemented a program to reward the cooperation of its key suppliers and obtained several benefits with this program. Finally, it is concluded that issues such as identification of the real needs and expectations of stakeholders, the philosophy of quality at source, consolidation of the customer base and suppliers and cooperation between companies are key points for improving business performance, at every link in the supply chain.

**Keywords**—supply chain, customer relationship supplier, performance in supply, quality; cost reduction.

## I. INTRODUCTION

In the last years, it has been commented that the competition happens between chains of supplies and not only between companies. According to Garbade (2004) apud Alves, Andrade and Fernandes (2006), this requires companies to increase the efficiency and effectiveness of their processes and operations, seeking to produce more and more, with fewer resources and at the lowest possible cost. Toledo et. al. (2004) states that companies generally live a reality in which they can no longer plan or act in isolation, requiring a coordinated behavior between those belonging to the same supply chain. Adapting from Schramm (2008), organizations recognize the need to improve their relationship with supply chain partners, but find it difficult to develop effective mechanisms that can bring improvements in the performance of these partners to their needs.

Thus, the study on the management of the supply chain is an emerging issue and deserves several contributions. In this context, issues related to strategy, quality and management of customers and suppliers will be addressed in this article. The main objective of this work is to demonstrate the benefits of cooperation between customers and suppliers in the supply chain. This research was conducted through a case study in a steel company. The work was organized in 4 sections. Section 2 presents issues related to improving the performance of the supply chain. Section 3 describes improving the relationship in the supply chain. Section 4 presents an example of relationship and improvement of performance in the supply chain, through the management of the relationship with suppliers. Finally, in Section 4 the final considerations of the present work are presented.

## II. IMPROVING SUPPLY CHAIN PERFORMANCE

One way to implement improvements in the performance of these partners is through identifying their needs and expectations. According to Frooman (1999) apud Chiavenato and Sapiro (2003), an organization is a system that brings together various stakeholders with whom it establishes its relations. According to Loureiro (1999), it is necessary to validate the requirements of the stakeholders before starting a project. In the possession of the validated requirements, they should be converted into technical requirements and then detailed. With this, formulate and establish a project that is effective to meet such requirements. Also, adapting from Loureiro (1999), the identification of stakeholders is carried out by identifying the people or organizations that are affected or affect the attributes of the final product, its business processes and the organization that performs them.

In Figure 1, a suggested tool is presented, according to Womack and Jones (1996), to address stakeholders' needs, expectations and interests. This tool consists of a graph for identification of value for stakeholders, in which the vertical axis represents the level of performance desired and on the horizontal axis the importance that the stakeholder attributes to that characteristic. The main factors that contribute to aggregate value to the stakeholder are listed at the top of the chart and then allocated to each position of the chart according to the criteria of each axis described above.

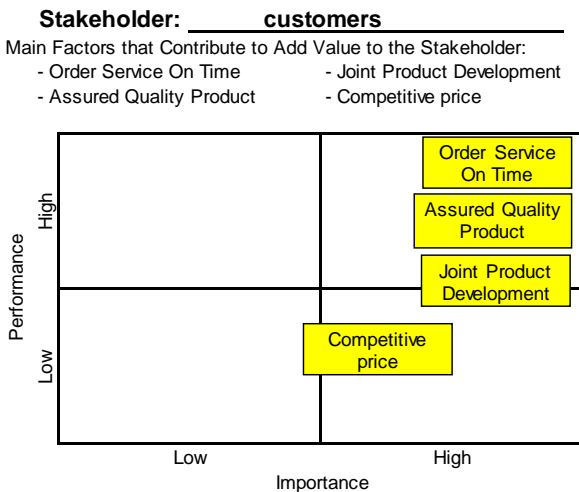


Fig.1: Value comparison chart for stakeholder

Identifying stakeholders' needs and expectations will give insight into what they expect or want at each link in the supply chain, including rating them according to their relevance for performance or performance and importance. This vision will be useful in formatting programs and actions that encourage or motivate such partners to achieve the results needed to encourage cooperation between organizations that are part of the supply chain rather than competition between them.

Cooperation and competition are, in general, opposing positions in inter-company relations. In the competition, the companies have conflicting objectives: for one to win, another must lose. In cooperation, there are common goals: the gain of one does not exclude that of another. Carvalho and Sobral (2002) apud Rodrigues and Sellitto (2008) present a method to explain relationships between companies: If only the result of the transaction matters, competition arises. If the future relationship is also important, collaboration comes along. According to Narayanan and Raman (2004), in order to offer quality products, competitive strategies must be implemented, the logic and importance of decisions must be transmitted to suppliers in the supply chain, from suppliers to consumers, and generate motivation for continuous

performance improvement, through the stimulus to commitment and cooperation.

Pavan and Pires (2004) argue that the business scenario has been showing profound changes in the last decades derived from the high levels of national and international competition. Therefore, management systems and tools have been created in order to make the organization more competitive and profitable. More recently, the concept of Supply Chain Management has been highlighted, and is related to the connection of the main suppliers, manufacturing companies and distribution centers in order to meet the needs of the customer in the most appropriate way, in the shortest time possible and with the minor's costs. The main orientation of Supply Chain Management is end-customer satisfaction and cost reduction throughout the supply chain.

There are several examples of cooperation between companies: promoting improvements in customer processes, sharing best practice information, integrated product development, burden sharing, and more. A basic way of cooperation and to ensure the improvement of performance in costs and quality is the application of the philosophy of Quality in Origin.

According to Alves and Alves (2015) the origin of the quality is: ensure that the parts I receive in my operation and the parts I send to my client are free of defects. The Origin Quality system is defined by the slogan "I do not receive, I do not produce and I do not defect". Quality at source has six principles applicable to the Supply Chain:

- The objectives and goals are shared by all members of the chain;
- Quality is the result of commitment to the objectives and goals, responsibility and high performance of the organizations that make up the chain;
- Work methods and processes are continually improved;
- Work methods and processes are designed to satisfy customers and achieve the goals and objectives of the organization and, consequently, the chain;
- Effective communication (efficient and effective), from the raw material supply to the final customer, leads to agility and quality in decision making;
- The added value increases with the elimination of waste.

### III. IMPROVING SUPPLY CHAIN RELATIONSHIP

In an illustrative way, Toledo et. al. (2004) presents indications of possible coordinated strategies or actions to improve the relationship with partners, and their respective results, along the supply chain:

- Relationship Strategies in the Supply Chain - Sense Amount:
  - Partnership relationships between the industry and its suppliers, to guarantee quality in the chain;
  - Incentives and actions provided by the industry to improve the quality of products received from suppliers such as: investments in training, technical assistance, joint improvement actions, payment for quality, financing of production resources, etc .;
  - Involvement of the supplier in the process of developing new products;
  - Shared adoption of systematic quality management to ensure consistency in standardization of products;
  - Joint quality assessment (quality audits performed at the supplier);
  - Joint elaboration of improvement action plans;
  - Follow-up of the improvements implemented; and
  - Measurement and analysis of performance indicators in quality (reduction of costs of failures and waste, improvement in product quality and customer satisfaction, etc.).
- Relationship Strategies in the Supply Chain - Downstream
  - Actions of requirements and guidelines for the preservation of the quality of the final product, such as training, in order to ensure the proper handling, storage, transportation and exposure of the final product;
  - Incentives provided by the industry to the distributor in terms of price discounts, better payment terms, preferential treatment, etc., due to the preservation of product quality;
  - Obtaining feedback from customers regarding the quality of the product and the services offered;
  - Awards for services provided by the distributor;
  - Survey and formulation of specific customer needs;
  - Customer involvement in the new product development process;
  - Shared adoption of quality management practices to ensure consistency in product standardization;

- Joint quality assessment (audits performed at distributors and retailers);
- Joint elaboration of improvement action plans;
- Follow-up of the improvements made; and
- Measuring improvements through performance indicators (on quality preservation, losses, customer satisfaction, etc.).

It is important to note that actions must be carried out based on the analysis of stakeholder needs and expectations. The actions cited here are by way of example only.

According to Pires (2009), in recent years one of the most notable trends in supply chain management is the process of restructuring and consolidating the supplier and customer base. The main objective of this movement is to define a set of companies (both suppliers and customers) with which one really wants to build a true partnership. In this restructuring, a fundamental point is the identification and the alignment of competences such that the result can give a positive distinction to the competition and final consumers. With respect to the supplier base, the restructuring process is practically reduced to the reduction of the number of suppliers with whom the company intends to continue working and maintaining a direct and agile channel of communication. Regarding the customer base, the idea of restructuring tends to be more complicated in most companies, because it brings with it the idea of losing something. But it is important for the company to be clear about the return provided by each of its clients, to be aware of the limitations of resources to be able to serve them satisfactorily and to have the perception that, often, it is necessary to define priorities in the service.

Pires (2009) also defines:

- Customer Relationship Management: it is the process that provides the structure for the development and maintenance of the relationship with customers. The key clients and client groups for which goals are set are usually identified. Also, teams focused on these clients worked to improve processes, eliminate variation in demand and activities that do not add value to customers. At the same time, reports are designed to measure the return that each key customer provides.
- Supplier Relationship Management: it is the process that defines how the company interacts with its suppliers and can be considered as a "mirror image" of customer relationship management. Thus, the company must develop

partnerships with key suppliers in order to support business processes such as manufacturing flow management and product development and marketing. Generally, suppliers are ranked based on factors such as degree of contribution and importance to the company and long-term partnerships are developed with only a select group of them. The goal is to build win-win relationships and engage key suppliers from the early stages of product design.

About the supply chain, ISO-9001, among several other items, defines:

- The organization must evaluate and select suppliers based on their ability to deliver products (and services) according to the requirements of the organization.
- The organization shall determine and take effective action to communicate with customers regarding: product information, handling of inquiries, contracts or orders, including customer amendments and feedback, including complaints.
- As one of the performance measures of the management system, the organization should monitor information regarding the client's perception of whether the organization has met the requirements of the client.

These initiatives and practices form the basis for building business-to-business cooperation, improving relationships and reducing costs. The end customer earns both by receiving a product of better quality as well as in cost issues.

#### **IV. CASE STUDY ON SUPPLIER RELATIONSHIP MANAGEMENT: IMPROVING RELATIONSHIP AND SUPPLY CHAIN PERFORMANCE**

Handfield et. al. (2000) states that developing a supplier is any activity that a customer company performs in order to improve supplier performance and / or capacity in the short or long term.

Pires (2009) points out that as manufacturing companies increasingly pass on components and services and reinforce their focus on achieving their core competencies, they increasingly expect their suppliers to perform properly. This usually means delivering quality components or services delivered on time, with innovative features and competitive pricing. When this does not happen, the client company has at least three alternatives: to go on to produce the component or perform the service internally, switch to a more capable supplier, or help the current supplier to improve its capacity.

Handfield (2000) apud Pires (2009) defines a 5-step procedure for supplier development:

- Identify the most critical items, or the most strategic items for the companies, which are generally high value-added items, purchased in large volumes and difficult to replace.
- Identify critical suppliers, which consisted in evaluating the performance of vendors of items classified as critical.
- Building a team, aligning objectives and defining key projects, consists of arranging the house and setting up a multifunctional work team before beginning work with suppliers. The objectives of the client company and the rules of the conduct of development must also be clearly defined. Once this is done, the next step is to contact, discuss and strategically align the objectives with the supplier, defining the key development projects to be conducted.
- Define agreement details, that is, both companies need to define the specific metrics to monitor their process. The agreement should also specify the dates of the important events and the final deadlines of the improvement process, as well as the role to be played by each company in the process.
- Monitor development and modify strategies, that is, continuously monitor supplier development and adjust the initial plan whenever necessary.

A large Brazilian company with assets in several sectors of the economy, including the steelmaker, has implemented a program to reward the cooperation of its key suppliers. The assumptions and evaluation methodology for the awards are as follows:

- The suppliers eligible to participate in the awards are those with a turnover above R \$ 1 Million / year.
- Evaluation of the physical growth of turnover among the group companies (client companies).
- Evaluation of the improvements in the productive processes of the company-client, through innovative measures that the supplier has suggested.
- The supplier must present the results of the cost reduction projects to the client company, that is, the supplier develops projects in the company that will impact on the cost reduction in the client's operation.
- Evaluation of compliance with contracts or purchase orders.
- Evaluation of punctuality in delivery.
- A questionnaire for self-assessment is sent to suppliers, with questions related to quality

management, environmental management, occupational health and safety management, issues related to product quality, logistics and internal improvements in the process.

All suppliers that meet billings above R \$ 1 million / year are invited to participate in the pre-selection for the award, however, suppliers must apply and prepare the evidence together with the client company. This is not just an evaluation of the client company towards the suppliers. It is a joint assessment by the parties. After the evaluation period, the suppliers are invited to an awards event and in this event, the suppliers that have contributed to the success of the client company are then announced and awarded.

After the implementation of this award, the following benefits were noted:

- Reduction in the Base of Suppliers (main inputs and services): from 748 to 362.
- Improvement in Delivery Performance: from 77% to 92%.
- Reduction in the Cost of Productive Processes: More than R \$ 7,000,000.00.

With this case, important points, previously discussed, are observed, such as:

- To participate in the premium, it is necessary to have a high turnover and to increase the volume of business with the client company, this refers to the discussions about the consolidation of the supplier base.
- Improvements in the client's process lead us to identify the needs and expectations of the stakeholders. Without identifying these needs and expectations it is not possible to suggest or implement such improvements.
- The cost reduction projects to be implemented by the supplier in the client company is an example of cooperation between supplier and customer.
- The evaluation of contract compliance, punctual delivery and the self-assessment questionnaire are examples of the application of the philosophy of quality at source.

## V. CONCLUSION

During this research, the importance of improving the relationship between customers and suppliers was verified as a starting point for the improvement of the companies' performance. The improvement in this relationship allows generating benefits, translated into results for companies. Issues such as identifying the real needs and expectations of stakeholders, the philosophy of quality at source, consolidation of the customer base and suppliers and cooperation between companies are key points for

improving the performance of companies at all links in the chain of supplies.

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